

## **EXHIBIT 11**

# Preliminary Design Review 11/29/2005

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**V. Glebov, M. Moran, C. Fullone,  
A. Dillenbeck, M. Romanovsky**

## **High Yield Neutron Temporal Diagnostic (HYNTD) for OMEGA**

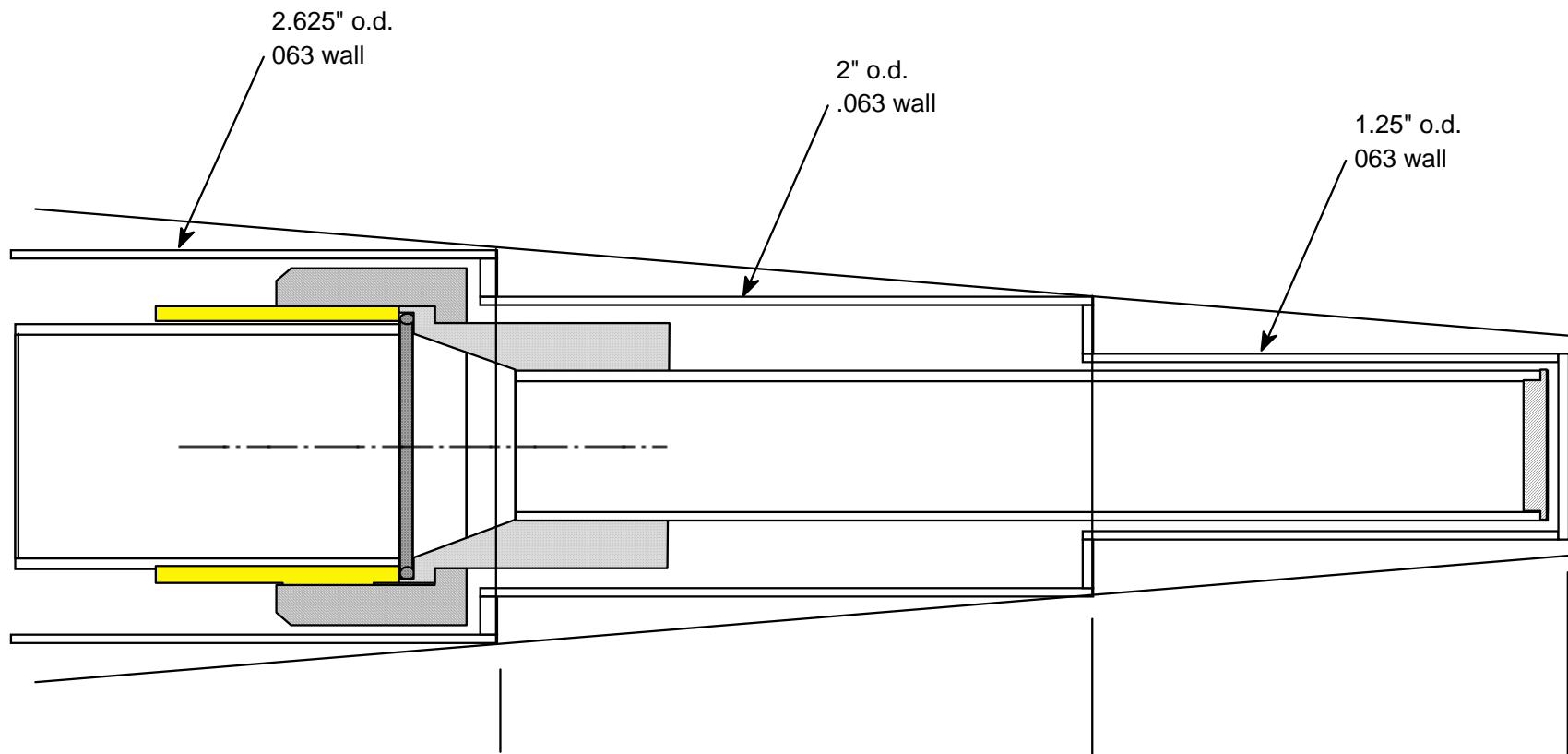
## There are several goals for this design review

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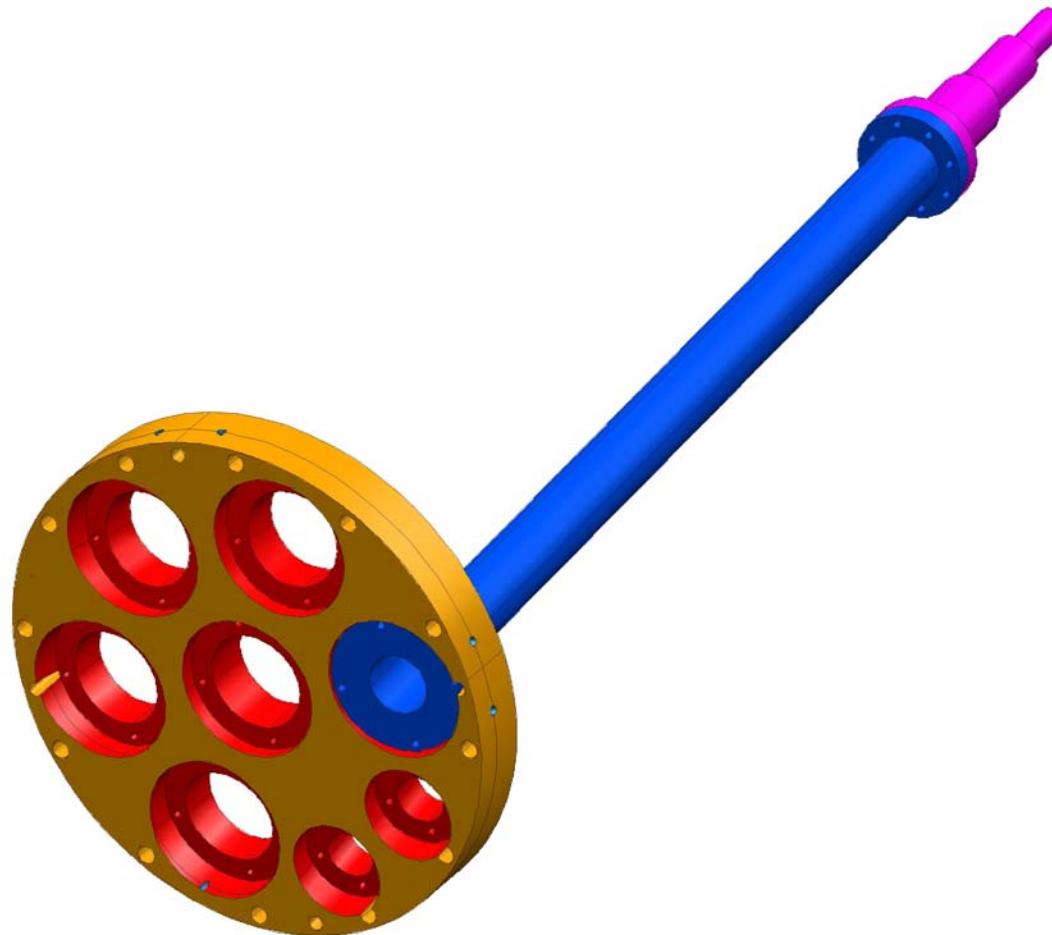


- Review the HYNTD design progress.
- Approval of the HYNTD hole location in the Target Bay floor.
- Approval of the final design of the stairs to P11 platform.
- Review and approve the HYNTD schedule.

# HYNTD detector insertion part will accommodate 1" scintillator or about 2" CO<sub>2</sub> cell

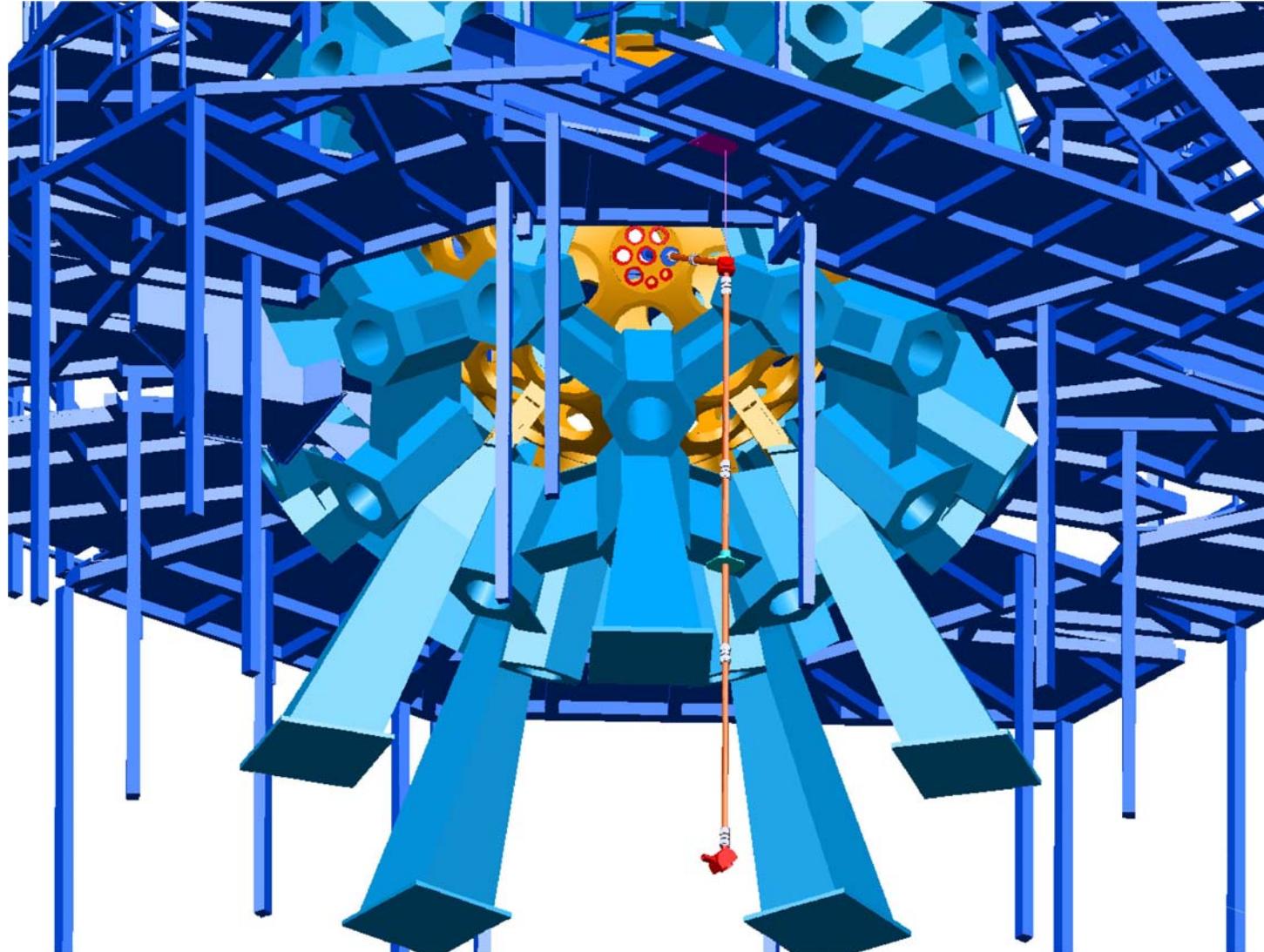


# Reentrant tube matching HYNTD detector insertion part is designed



## A general layout of HYNTD pipes is designed

UR  
LLE



UR 000994

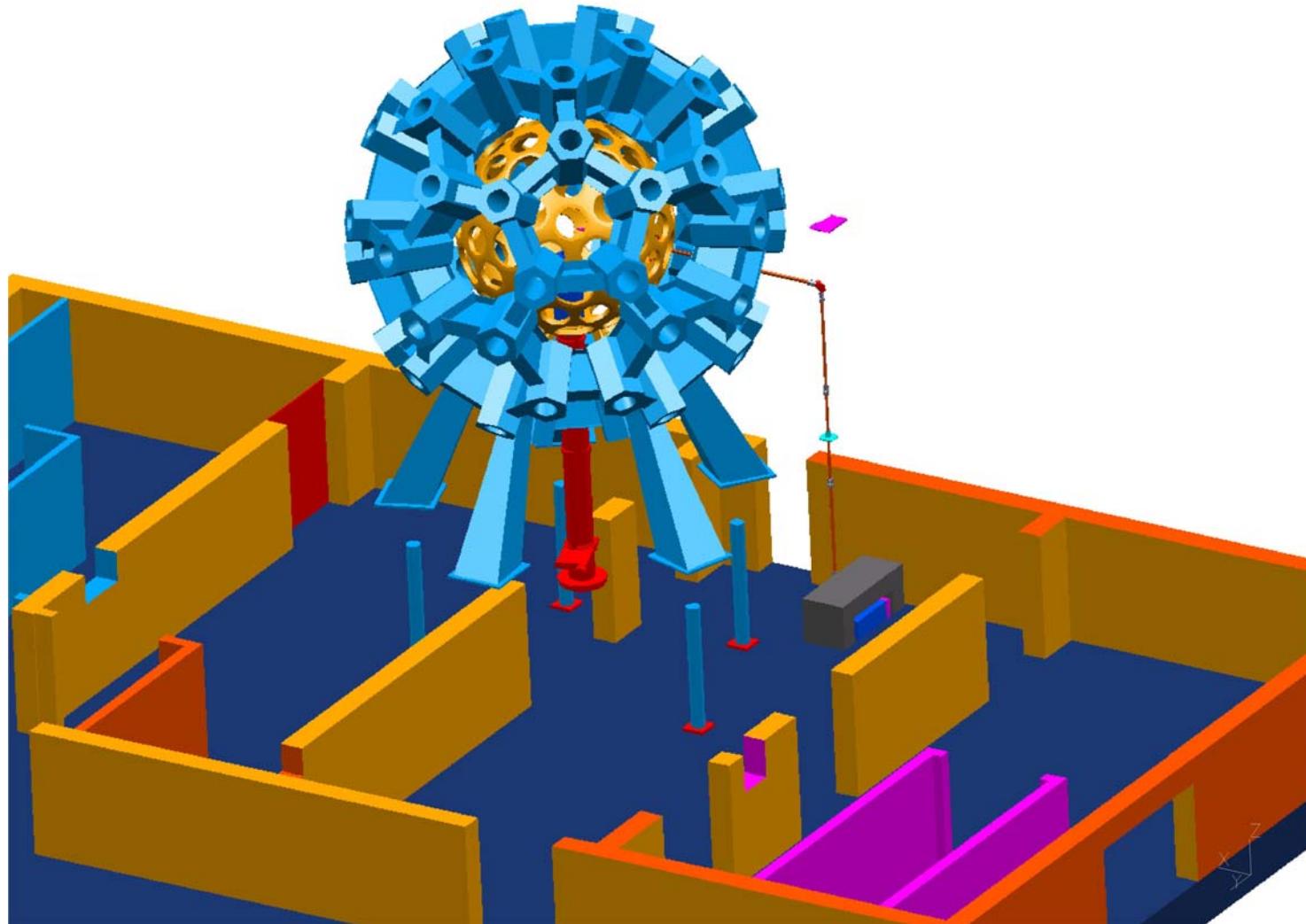
## A general layout of HYNTD pipes is designed

UR  
LLE



UR 000995

## A general layout of HYNTD pipes is designed

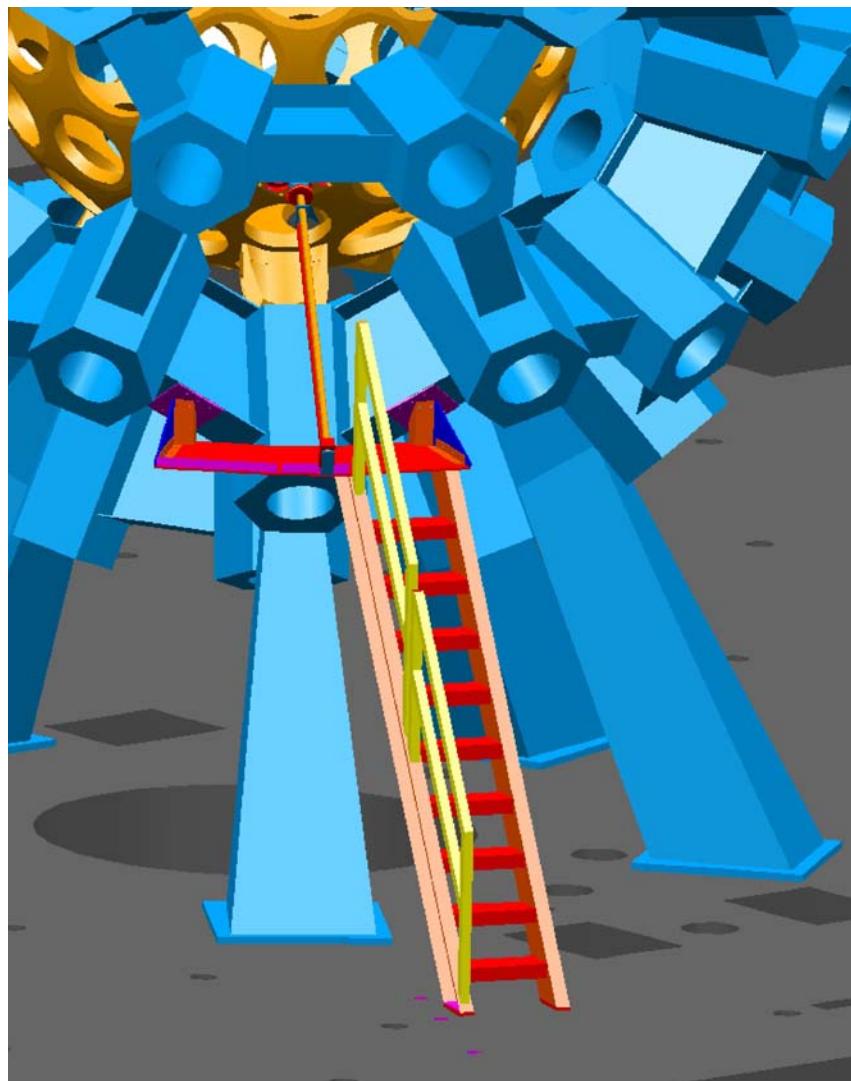


UR 000996

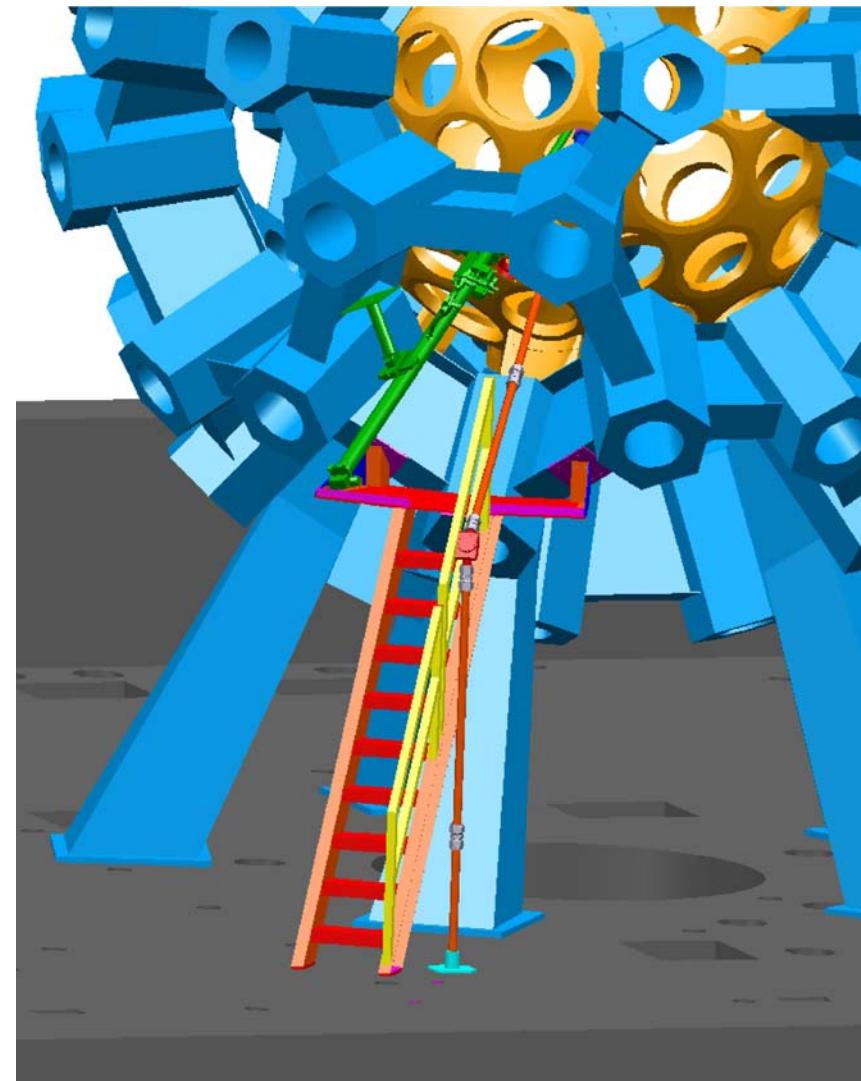
# P11 platform stairs should be moved from the right side to the center of the platform



Existing



Proposed



UR 000997

## Several possible location of HYNTD hole were identified



UR 000998

# **HYNTD manufacturing and installation schedule is determined by KO schedule**



- |  |                           |
|--|---------------------------|
| • Drill hole in the Target Bay and platform modification | 12/05 – 01/06<br>m. weeks |
| • Pipes and mirrors procurement                          | 12/05 – 01/06             |
| • HYNTD Final design review                              | 01- 02/06                 |
| • HYNTD manufacturing                                    | 01 - 02/06                |
| • Reentrant tube and KO installation                     | 03/06 m. week             |
| • HYNTD installation, alignment, X-ray tests             | 04/06                     |
| • HYNTD neutron operation                                | 05/06                     |

**THE UNIVERSITY OF ROCHESTER**

**INTRAMURAL CORRESPONDENCE**

Laboratory for Laser Energetics

**DESIGN REVIEW MEMORANDUM**

**12 December 2005**

**TO:** All Attendees

**COPIES:** T. Hinterman, R Keck, K Thorp, S Stagnitto, R Keck

**FROM:** V. Glebov

**SUBJECT: High Yield Neutron Temporal Diagnostic PDR – Nov 29, 2005**

**Reference:** Design review materials at:

\Hop\Experimental\DiagnosticDevelopment\HYNTD

**Attendees:**

W. Armstrong	T. Duffy	S. Roberts
J. Bourgade	V. Glebov	C. Sangster
A. Dillenbeck	S. Loucks	C. Stoeckl
C. Fullone	G. Pien	P. Jaanimagi

**Background**

The existing OMEGA Neutron Temporal Diagnostic (NTD) streak camera located in the Target Bay is saturated by neutron-induced background at neutron yields higher than  $3 \times 10^{13} - 5 \times 10^{13}$ . Experiments with cryogenic DT target may exceed this yield limit. Fast Ignition experiments using both OMEGA and OMEGA-EP lasers can produce neutron yield up to  $1 \times 10^{15}$ . Therefore a new High Yield Neutron Temporal Diagnostic (HYNTD) is required for the future experiments on OMEGA.

Recent tests on OMEGA demonstrated feasibility of a new NTD detector based on a light pipe. In this approach light from a scintillator in reentrant tube delivered to streak camera outside of the Target Bay area by a polished stainless pipe. The goal of this project is to build HYNTD based on a light pipe.

Vladimir Glebov presented the PDR for the High Yield Neutron Temporal Diagnostic for Omega. The following summarizes the discussions:

**PDR Discussion**

Evaluate the use of aluminum in leu of stainless steel tubing.

A ROSS streak camera needs to be allocated for this project.

The installation is targeted for March and commissioned by May 2006 for High Yield DT shots in the first week of May..

**Action Items:**

#	Items	Responsibility
1	Evaluate the use of aluminum in leu of stainless steel tubing.	V. Glebov
2	A ROSS streak camera needs to be allocated for this project.	V. Glebov
3		
4		
5		

## **EXHIBIT 12**

## **Final Design Review 06/13/2006**

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**V. Glebov, M. Moran, M. Cruz, C. Stoeckl,  
A. Dillenbeck, P. Ellsworth, C. Fullone,  
M. Romanovsky**

## **High Yield Neutron Temporal Diagnostic (HYNTD) for OMEGA**

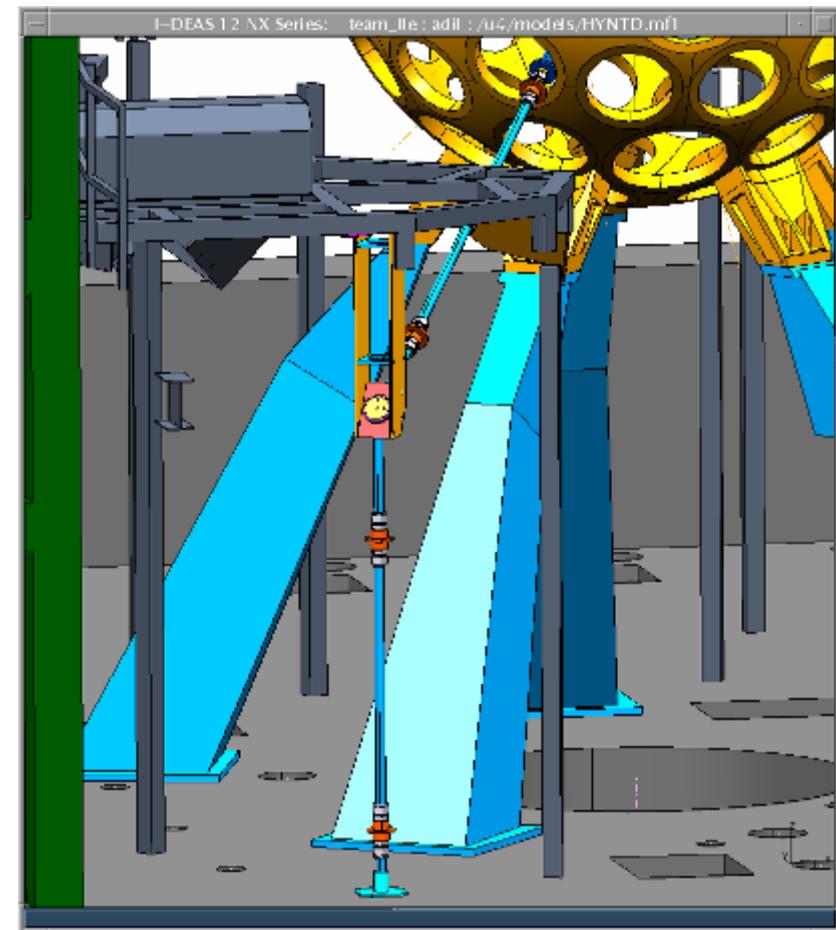
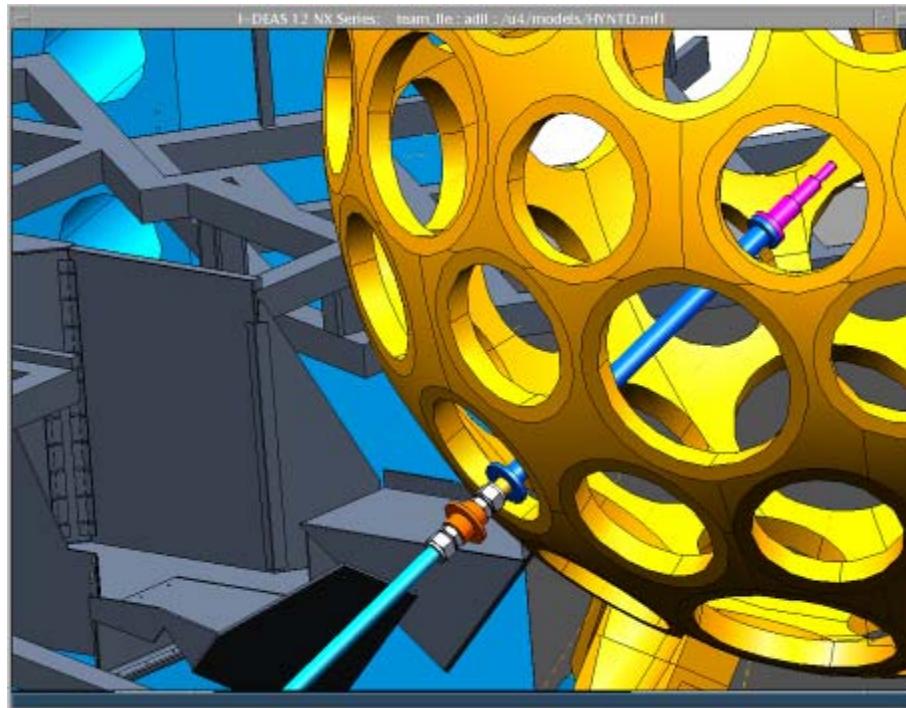
# The HYNTD will be a multi-purpose diagnostic on OMEGA

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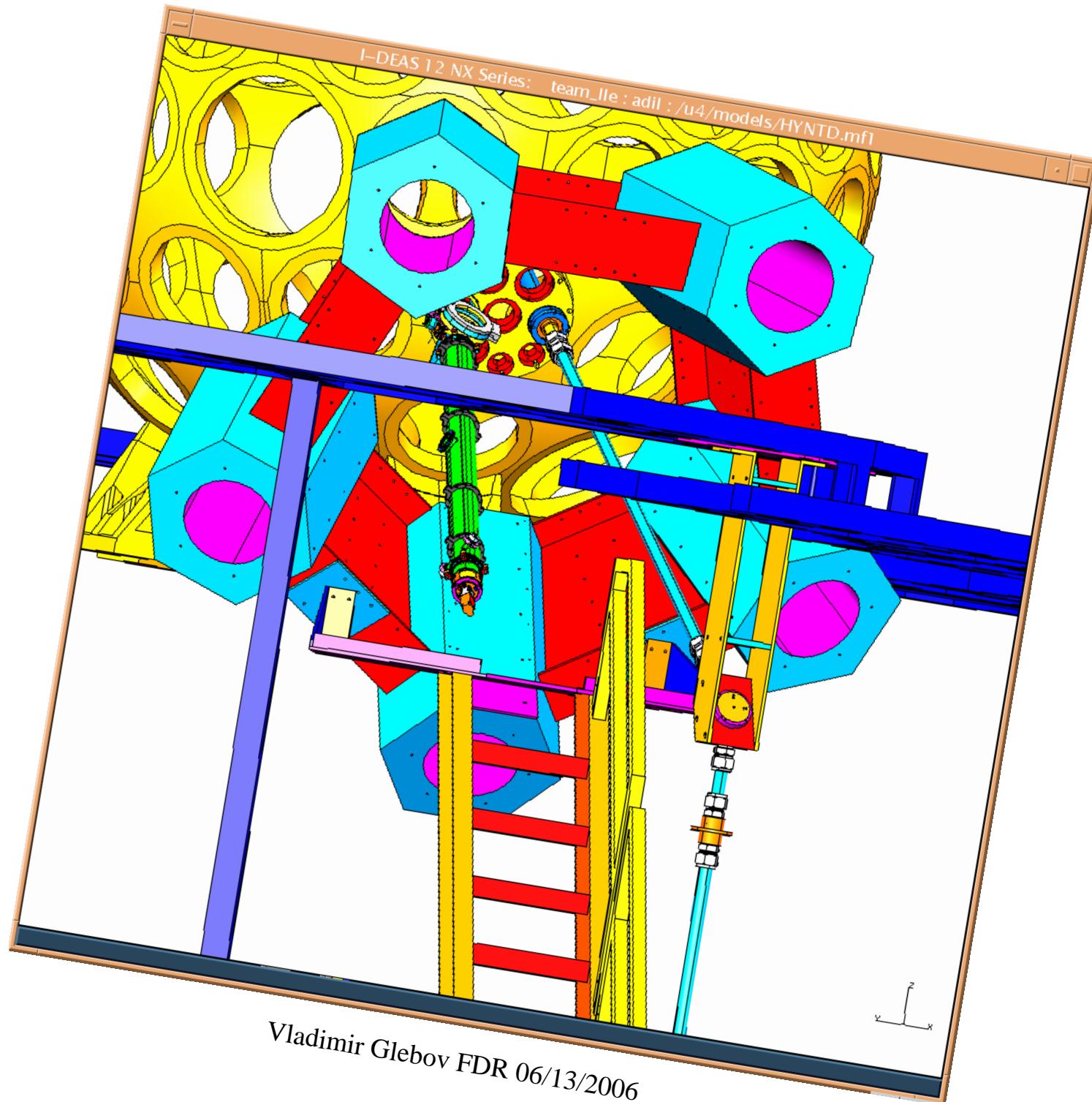
- The HYNTD will operate as OMEGA diagnostic and as a platform for gamma bang time development for the NIF. Other application are also possible (X-rays, nTOF).
- Both scintillator or CO<sub>2</sub> cell can be installed in HYNTD.
- Both a ROSS streak camera and a fast PMT will be used in HYNTD separately or simultaneously.
- The HYNTD should have independent of NTD timing calibration.
- The HYNTD reentrant tube will consist of stainless steel (welding) and aluminum parts (for X-ray calibration).
- Our goal is to test the HYNTD on July 19 high yield shots.

# The High Yield Neutron Temporal Diagnostic based on Light Pipe is under development at LLE



Vladimir Glebov FDR 06/13/2006

UR 001220

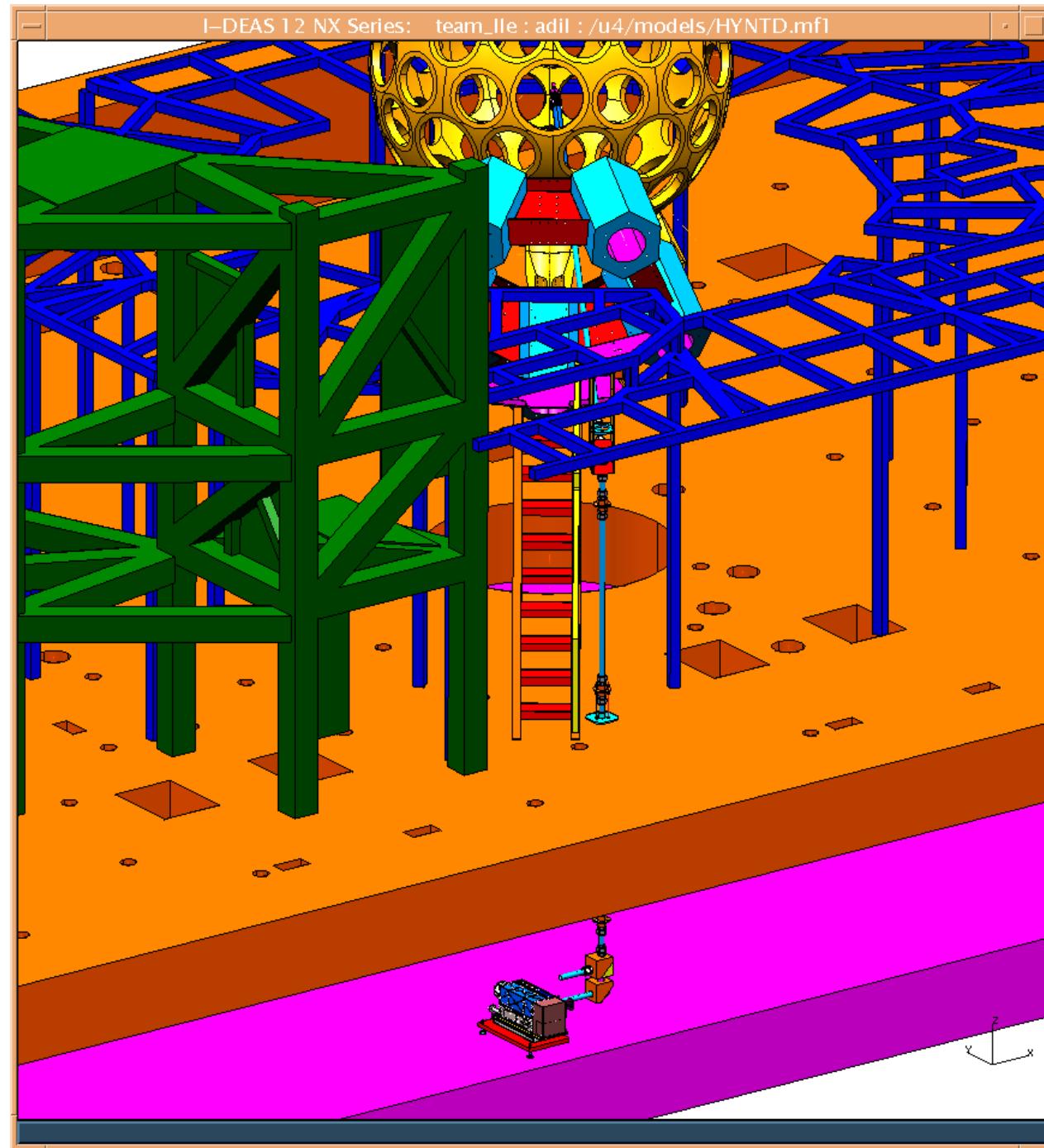


UR 001221

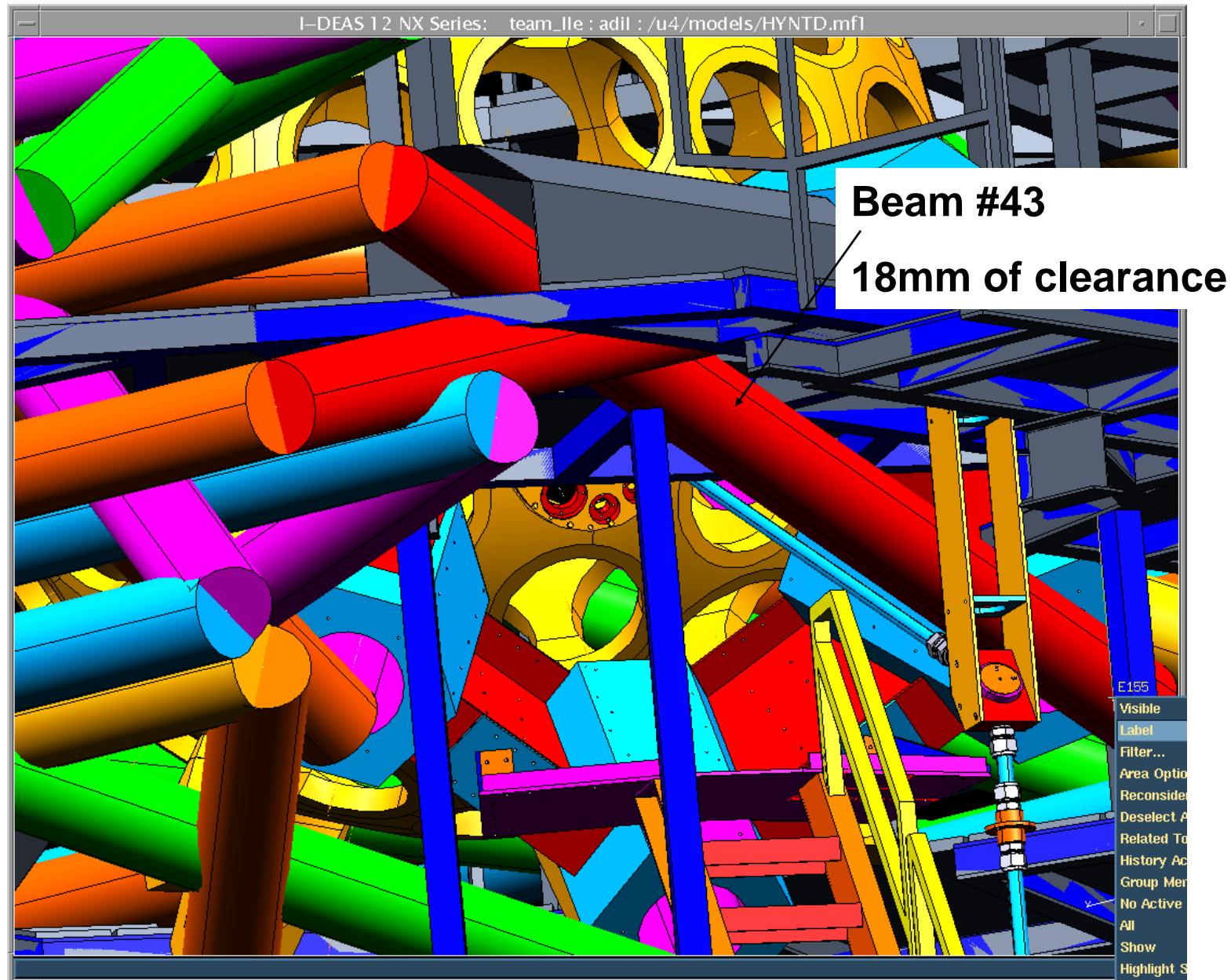


Vladimir Glebov FDR 06/13/2006

UR 001222

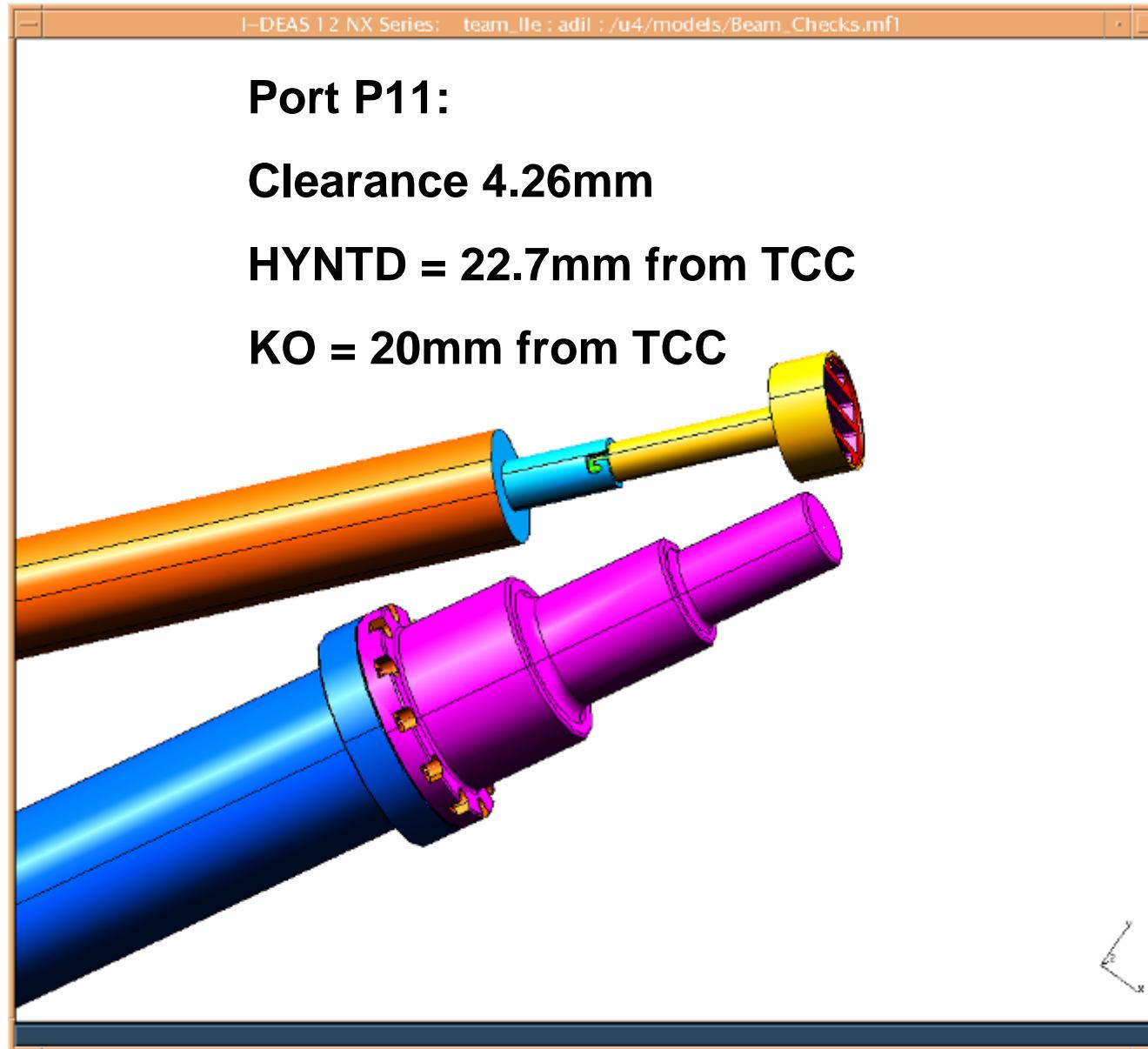


UR 001223



Vladimir Glebov FDR 06/13/2006

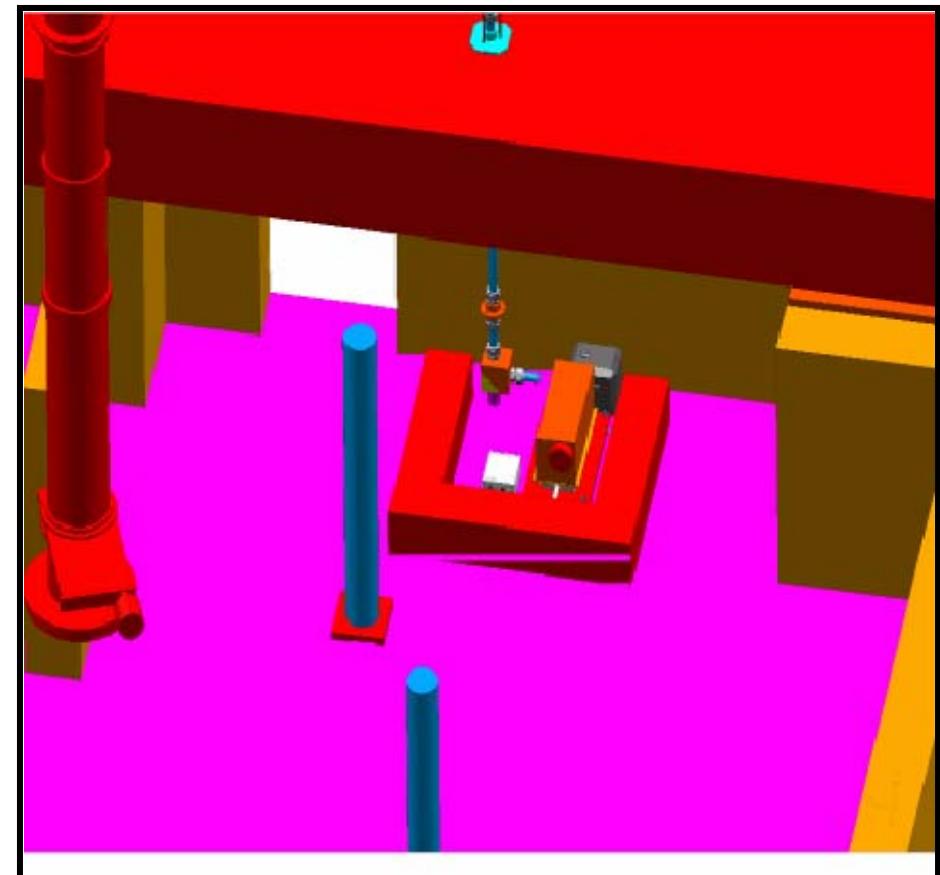
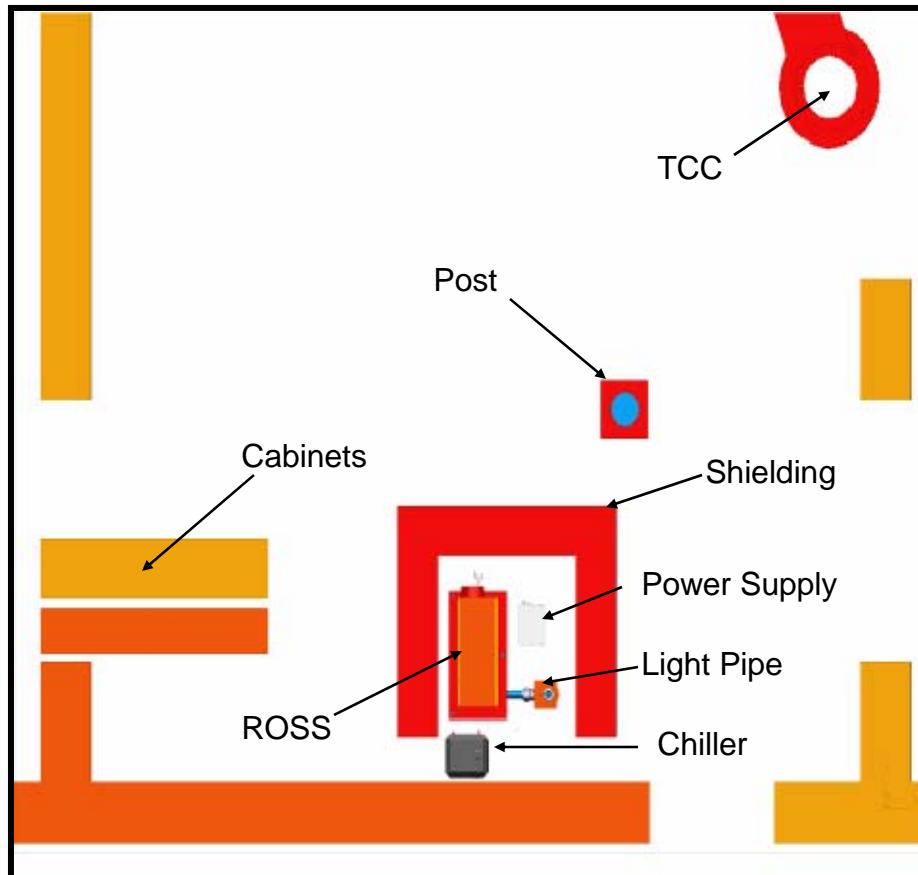
UR 001224



Vladimir Glebov FDR 06/13/2006

UR 001225

# Lacave Light Pipe Layout

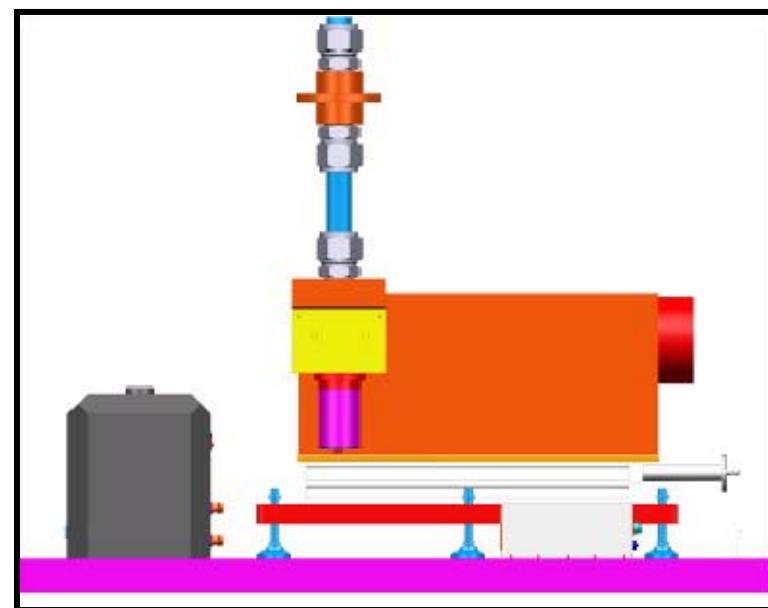
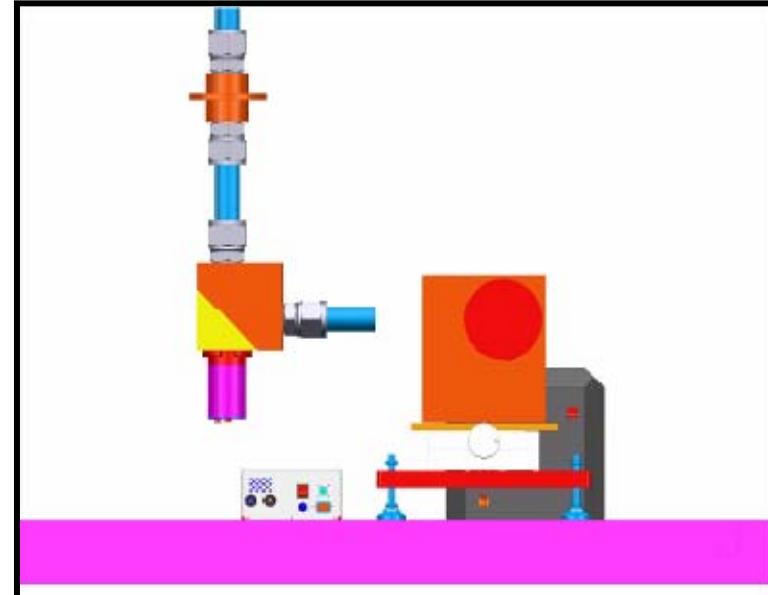
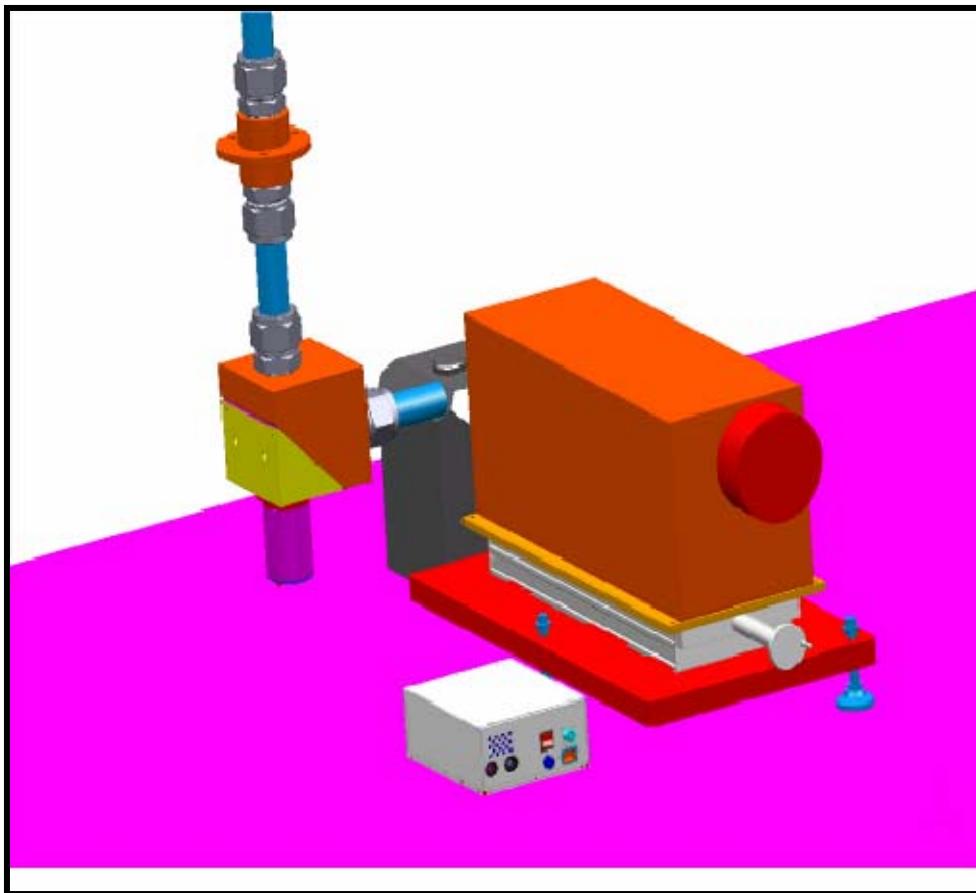


Vladimir Glebov FDR 06/13/2006

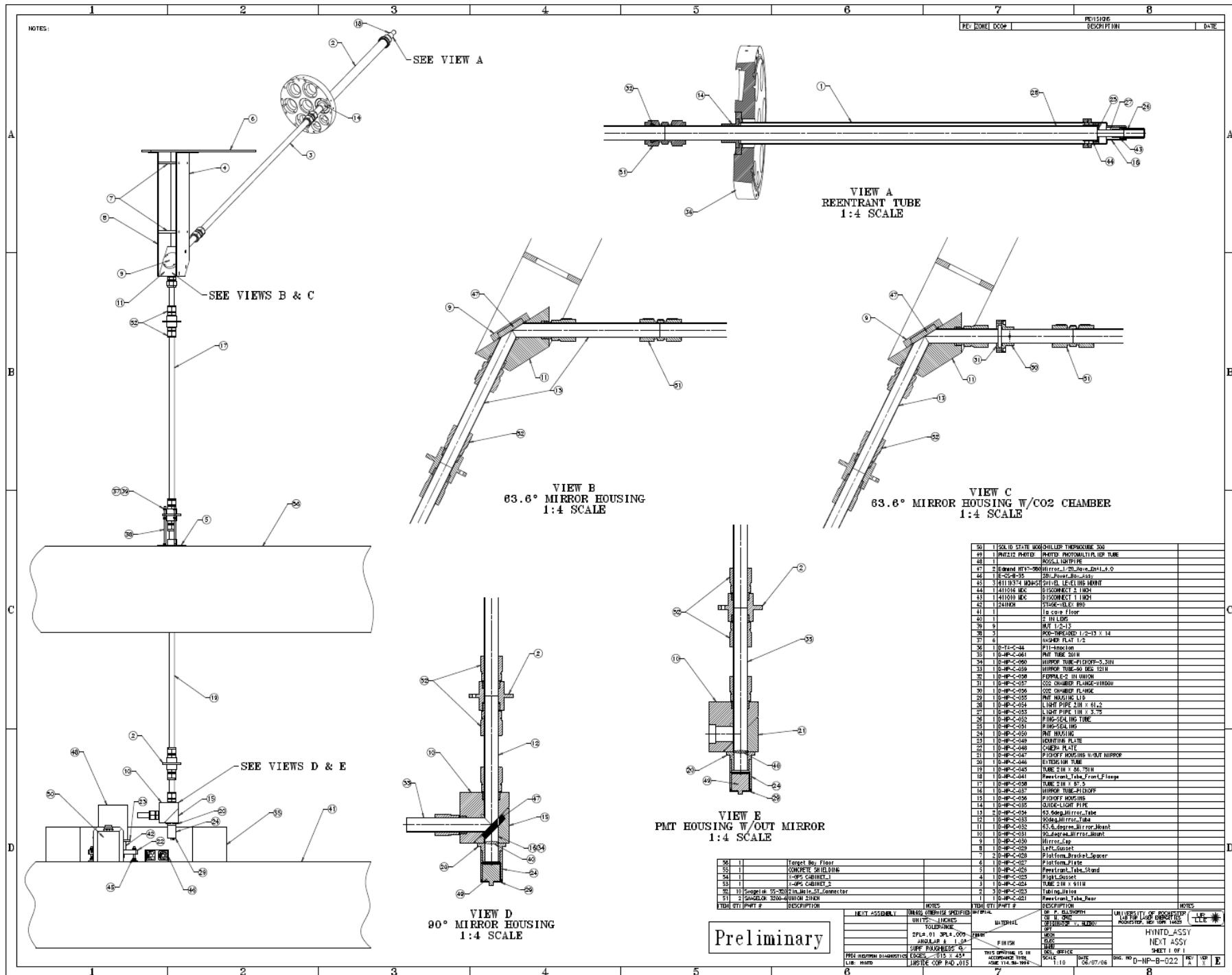
UR 001226

# ROSS Interface

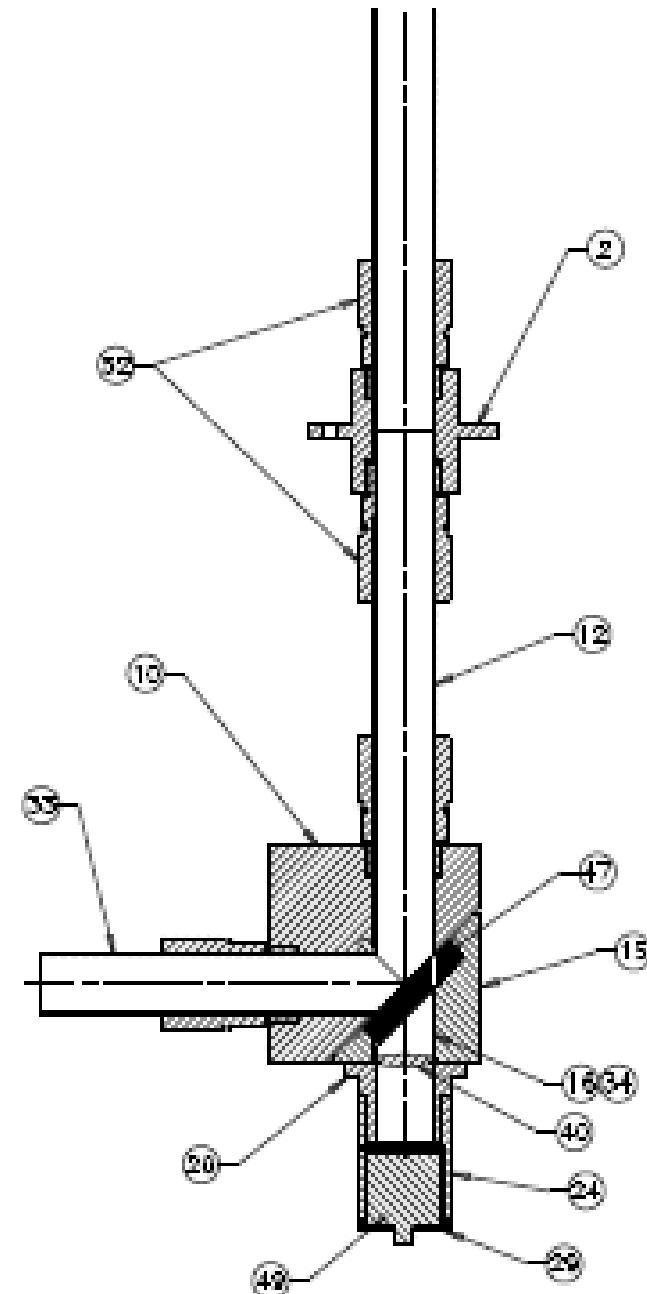
UR  
LLE



UR 001227

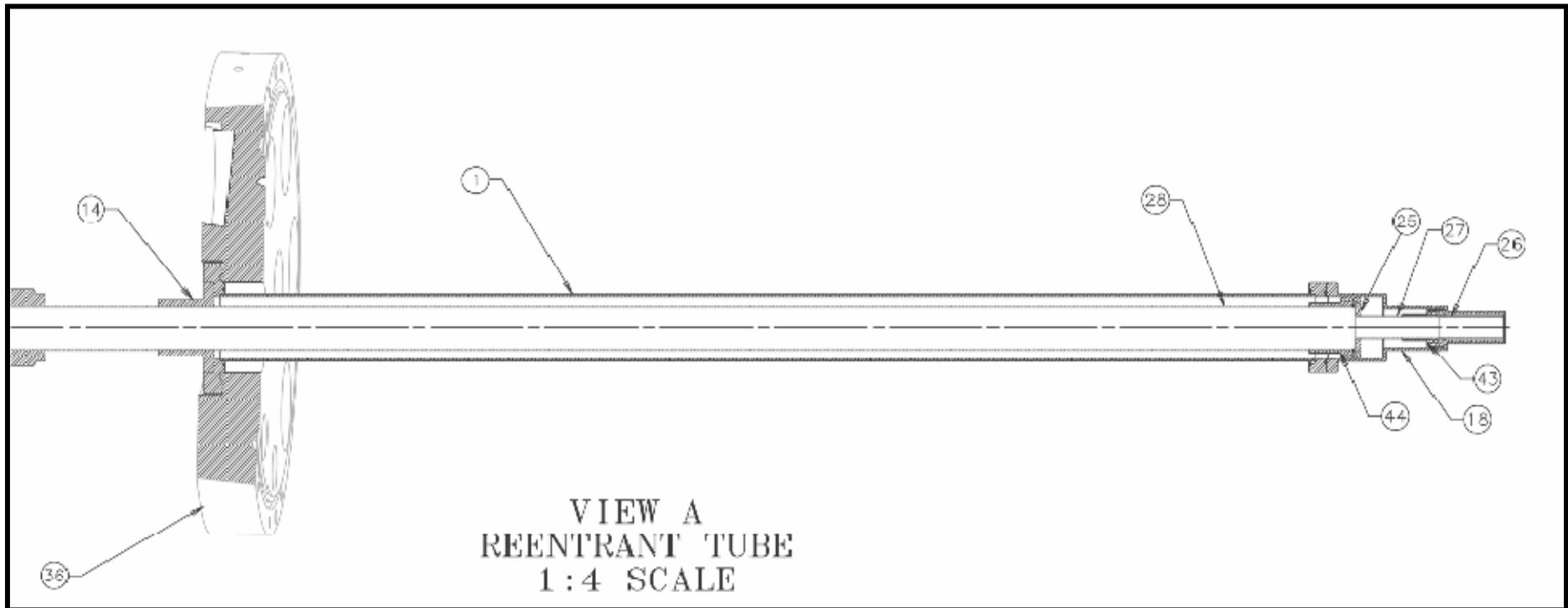


2	D-NP-C-023	TUBING UNION
10	D-NP-C-031	90 DEGREE MIRROR MOUNT
12	D-NP-C-033	90 EDGE MIRROR TUBE
15	D-NP-C-036	PICKOFF HOUSING
16	D-NP-C-037	MIRROR TUBE PICKOFF
20	D-NP-C-045	EXTENSION TUBE
24	D-NP-C-050	PMT HOUSING
29	D-NP-C-055	PMT HOUSING LID
33	D-NP-C-059	MIRROR TUBE-90DEG 12IN
34	D-NP-C-060	MIRROR TUBE PICKOFF-3.3IN
40	-	2" Ø LENS
47	NT47-580	EDMUND OPTICS 4" MIRROR
49	PMT212	PHOTEK PHOTOMULTIPLIER TUBE
52	3200-6	SWAGELOK 2" MALE CONNECTOR



Vladimir Glebov FDR 06/13/2006

UR 001229

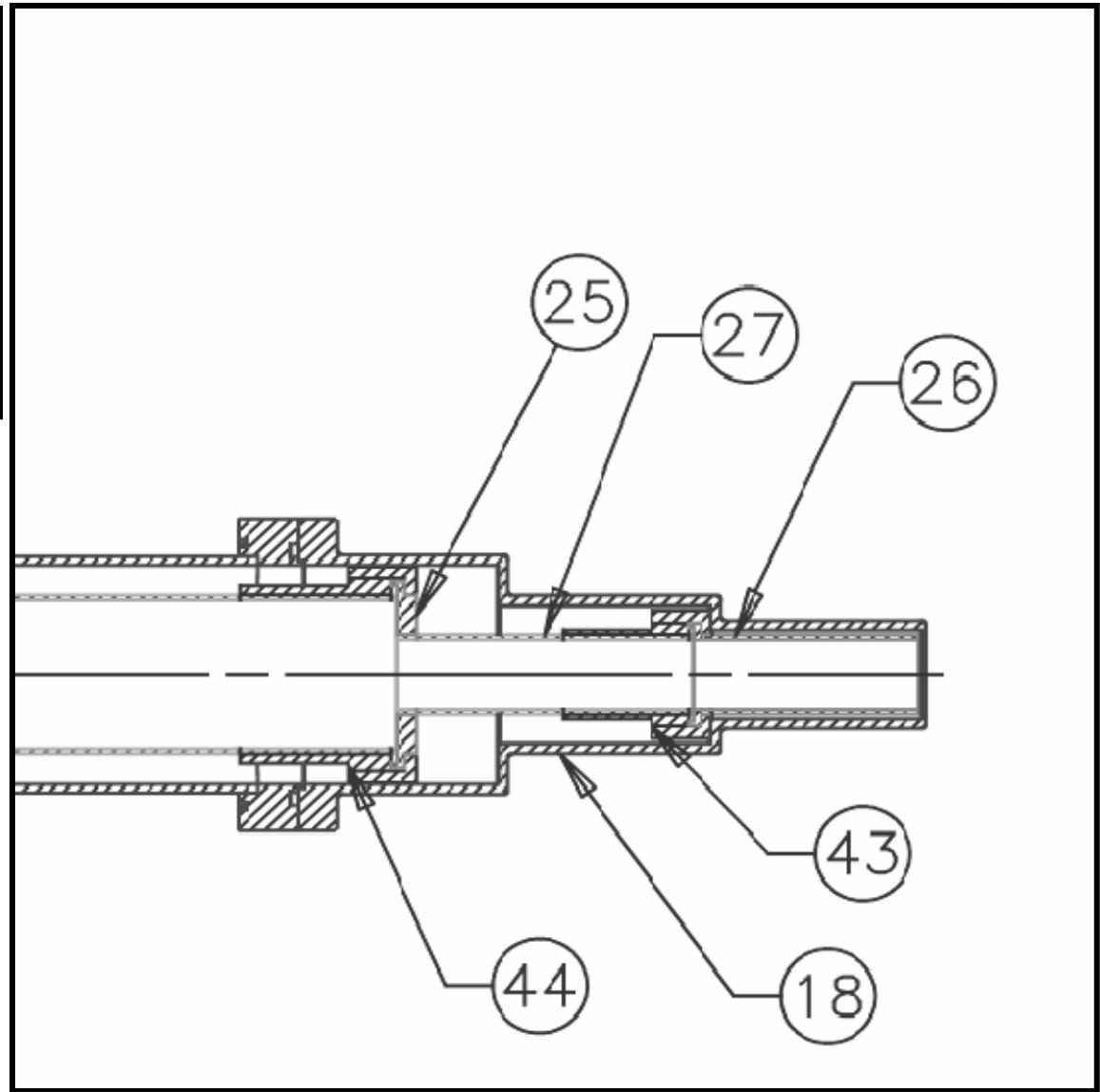


VIEW A  
REENTRANT TUBE  
1 : 4 SCALE

Vladimir Glebov FDR 06/13/2006

UR 001230

18	D-NP-C-041	REENTRANT TUBE FRONT FLANGE
25	D-NP-C-051	RING-SEALING
26	D-NP-C-052	RING-SEALING TUBE
27	D-NP-C-053	LIGHT PIPE 1" X 3.75
43	411010	MDC 1" DISCONNECT
44	411016	MDC 2" DISCONNECT



Vladimir Glebov FDR 06/13/2006

UR 001231

# A lot of HYNTD components are ready. Some of them were tested last week.

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- Drawing are ready
- Pipes are delivered
- Swagelocks, mirrors are delivered
- ROSS is operational
- Data acquisition software was tested
- HYNTD PC was tested

# The HYNTD needs manufacturing and assembly. Some components needs attention.



- Reentrant tube manufacturing June
- Pipes cut to length June
- Support parts manufacturing June – July 7
- Stairs to P11 platform June 19 – July 7
- KO-2 removal and PCD installation June 19 – July 7
- Reentrant tube installation July 7
- HYNTD assembly and alignments July 10 – July 17
- Two new green fiducials by July 17
- HTS module/crate needs to be fixed June
- Analysis software (like NTD/PTD) July

- 1 -

THE UNIVERSITY OF ROCHESTER

INTRAMURAL CORRESPONDENCE

Laboratory for Laser Energetics

**DESIGN REVIEW MEMORANDUM**

**14 June 2006**

**TO:** All Attendees

**COPIES:** R. Boni, R Keck, L. Lund, T. Wilson

**FROM:** V. Glebov

**SUBJECT:** High Yield Neutron Temporal Diagnostic (HYNTD) FDR – (6/13/06)

**Reference:** Design review materials at: \Hopi\Experimental\DiagnosticDevelopment\HYNTD

**Attendees:**

W. Armstrong	C Fullone	S Roberts
M. Cruz	T. Hinterman	T Sangster
A Dillenbeck	S Loucks	W. Shmayda
T Duffy	D. Meyerhofer	C Stoeckl
P. Ellsworth	G Pien	K Thorp

**Background**

The High Yield Neutron Temporal Diagnostic (HYNTD) is required for the future experiments on OMEGA because the current NTD streak camera is saturated by neutron-induced background at neutron yields higher than  $3 \times 10^{13} - 5 \times 10^{13}$ . The HYNTD uses a light pipe and a ROSS installed in LaCave.

Vladimir Glebov presented the FDR. The goal is to have this system in place for shots on 7/19/06.

**Discussion points:**

- The light pipe will be supported by a bracket that will be bolted to the bottom of the supports for the upper deck of the TMS platform. This will require drilling through the box beams. The ladder to the KO 2 area will be moved laterally to accommodate this installation.
- The procedure for installing the new NDI 2 (nee KO 2) will include initially pointing the Nuclear Diagnostic Inserter as far south as possible so as to avoid the HYNTD's reentrant tube on the first insertion.
- The light pipe will end just above the floor near the east wall in LaCave. The ROSS and the PMT power supply will be located there. This will constrain access to a cooler and some gas bottles, but that is deemed acceptable. It was noted that the equipment should be stood off of the floor to limit damage do to flooding.

- 2 -

- The installation images show a short stack of concrete blocks surrounding the equipment. In addition to protecting the equipment from feet etc., these are intended to shield neutrons originating at TCC:
  - Shielding will not be required for the initial operations.
  - The wall would have to be much taller than shown to actually provide shielding.
  - If shielding is needed, a separate design task will be required to provide a system that is safe, effective, and allows access when necessary.
- The section of the pipe that is radial to the chamber can be removed from the reentrant tube to allow installation of alternative scintillators. The design team was asked to review the geometry and tolerances at the TCC end to assure that the Scintillator assembly will not contact the last inside step before reaching the design location.
- After some discussion the conclusion was that the reentrant tube needs to be installed on 6/28/06.

**Action Items:**

- Verify that the light pipe does not clip Beamline 43 after installation. - **Pien**
- Provide SRF requirement to XOPS and SDG by 6/20/06. – **Glebov**
- Complete the CEQC process by 7/5/06. – **Glebov, Armstrong**
- Provide green fiducial energy requirements to Thorp by 6/20/06 – **Glebov**
- Provide green fiducial to diagnostic by 7/17/06. -- **Thorp**

## **EXHIBIT 13**

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**From:** Hans W. Herrmann [herrmann@lanl.gov]  
**Sent:** Wednesday, July 23, 2008 5:58 PM  
**To:** Vladimir Glebov  
**Cc:** Colin Horsfield  
**Subject:** DTRat

Vladimir,

We were planning to put PTD in TIM-5 on Aug 6, but MIT does not want to use it in DT. So TIM-5 is now available for your use. I tentatively placed CVD Diamond Detector - 1 in TIM-5. You have PI access to the SRF's if you would like to change this. So far, they are RID's 25865 (DT/3He) and 26170 (D2/3He)

We would like to run the light pipe with CO<sub>2</sub> and a fast PMT/SCD scope like we did last year. I expect Colin to be interacting with you on this again.

thanks,  
Hans

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Hans W. Herrmann, Ph.D., CDR (Ret., USNR)  
P-24 Plasma Physics, M/S E526  
Los Alamos National Laboratory  
Los Alamos, NM 87545  
[herrmann@lanl.gov](mailto:herrmann@lanl.gov)  
505-665-5075  
fax: 667-0405

if Foreign correspondence: TSPA or Correspondence

[X] Unrestricted (P-DIV-POL-020, Att. 1, Rev. 0, 28 March 2006) [ ] - Non-Technical Correspondence [X] - Technical Correspondence LA-UR [ ] - LA-CP [ ] - LALP [ ] Reviewed [ ] ADC - DUSA ADTO [ ] DUSA HEP [ ]

## **EXHIBIT 14**

**UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF NEW YORK**

SAMUEL M. ROBERTS,

Plaintiff,

-vs-

LOS ALAMOS NATIONAL SECURITY, LLC,  
AWE, PLC, and MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY,

Defendants,

AWE, PLC,

Third-Party Plaintiff,

-vs-

UNIVERSITY OF ROCHESTER,

Third-Party Defendant.

**RESPONSES AND OBJECTIONS  
OF DEFENDANT/THIRD-PARTY  
PLAINTIFF AWE, PLC TO THE  
FIRST SET OF  
INTERROGATORIES OF  
PLAINTIFF**

Defendant, AWE Plc (“AWE”), by its attorneys, Holland & Knight LLP, hereby responds to the First Set of Interrogatories (“Interrogatories”) of Plaintiff Samuel M. Roberts (“Plaintiff”) as follows:

**GENERAL OBJECTIONS**

AWE makes the following objections with respect to the Interrogatories and incorporates by reference said objections into each response as if set forth fully therein:

1. AWE objects to any interrogatory to the extent that it seeks to expand the scope

of, or imposes upon AWE, obligations greater than those required by the Federal Rules of Civil Procedure, the Local Rules for the United States District Court for the Western District of New York, or any applicable Orders of this Court.

2. AWE objects to any interrogatory to the extent that it seeks disclosure of information that is not confined to the relevant issues in this case, is beyond the scope of the pleadings, is irrelevant to the subject matter of this action, or is not reasonably calculated to lead to discovery of relevant admissible evidence.

3. AWE objects to any interrogatory to the extent that it is overbroad, unduly burdensome, and oppressive.

4. AWE objects to any interrogatory to the extent that it is vague, ambiguous, unintelligible, or unclear; AWE reserves the right to assert specific objections in the event the interrogatory is clarified.

5. AWE objects to any interrogatory to the extent that it is unlimited in time or otherwise not limited to a time frame relevant to this litigation and to the issues involved in this case on the grounds that such interrogatory seeks information neither relevant to the subject matter of the litigation, nor reasonably calculated to lead to the discovery of admissible evidence.

6. AWE objects to any interrogatory to the extent that it seeks information not within AWE's possession, custody, or control, or which is within the knowledge, possession, custody, or control of University of Rochester ("U of R"), Plaintiff, or a third party, or is otherwise accessible to Plaintiff from other sources with substantially the same or greater facility than AWE.

7. AWE objects to any interrogatory to the extent that it attempts to elicit protected documents or information subject to, among other things, the attorney-client privilege, the work

product doctrine, the confidentiality of documents containing the impressions, conclusions, opinions, legal research or theories of AWE or its attorneys, or seeks information prepared in anticipation of litigation or information that is proprietary in nature. Furthermore, AWE objects to any interrogatory to the extent it requests information from any and all agents, attorneys, investigators, consultants, experts, and other representatives that AWE has retained. AWE asserts each and every one of the foregoing privileges and protections applicable to the information sought to the fullest extent provided by law, applicable rules, and current and future case management orders. In the event any privileged information is produced by AWE, its production is inadvertent and does not constitute a waiver of any privilege.

8. AWE objects to any interrogatory to the extent that it seeks documents or information constituting trade secrets, or other confidential, research, development, commercial, financial, personal, and/or proprietary information.

10. AWE's responses are made without waiving or intending to waive, but rather preserving and intending to preserve:

- a. All objections to the relevance, authenticity or admissibility of any information. The supplying of any such information does not constitute an admission by AWE that such information is relevant, authentic or admissible;
- b. The right to object to the use of any document or thing in any aspect of this action or any other judicial or administrative proceeding or investigation;
- c. The right to object at any time to a demand for any further responses to the First Interrogatories or any other request for disclosure; and
- d. The right at any time to supplement or amend these responses.

12. Neither the fact that any objection is interposed to a particular interrogatory nor the fact that no objection is interposed necessarily means that responsive information or documents exist.

14. All objections and responses are based on AWE's knowledge, information and belief at this time. AWE has made a reasonable and good faith effort to respond. However,

AWE has not completed preparation for trial. AWE specifically reserves the right to amend these responses should additional information and/or documents become available and to use such information at trial. AWE further reserves the right to raise any additional objections deemed necessary or appropriate.

### **SPECIFIC OBJECTIONS AND RESPONSES**

**INTERROGATORY 1:** Identify any employee of AWE that was a principal investigator for the Experiment being conducted at the LLE on August 6, 2008.

**RESPONSE:** AWE objects to this interrogatory on the basis that the term “principal investigator” is not defined, and the interrogatory is, therefore, vague and ambiguous. AWE also objects to this interrogatory on the ground that “Experiment”, as defined, encompasses any scientific study at the LLE, and the interrogatory refers to “the” Experiment, but fails to identify the specific scientific study to which it refers. Notwithstanding, and without waiving, its general and specific objections, AWE states that no employee of AWE was a principal investigator for any experiment conducted at the LLE on August 6, 2008. Dr. Colin J. Horsfield was the senior AWE employee on site at LLE on August 6, 2008, and he was accompanied by 3 other AWE employees: Mike Rubery, Dave Drew and Warren Garbett.

**INTERROGATORY 2:** Identify any employee of AWE who was a principal investigator for any Experiments conducted at LLE prior to August 6, 2008.

**RESPONSE:** AWE objects to this interrogatory on the basis that it seeks information that is not relevant to this litigation and not likely to lead to relevant information. Notwithstanding, and without waiving, its general and specific objections, AWE respectfully refers Plaintiff to the documents AWE produced on March 9, 2012 (AWE 000003 - 15). AWE further states that no

AWE employee served as a principal investigator for Experiments conducted at LLE on August 6, 2008.

**INTERROGATORY 3:** State which Experiments referred to in response to Interrogatory 2 above were conducted when the Light Pipe was in use.

**RESPONSE:** AWE objects to this interrogatory on the basis that it seeks information that is not relevant to this litigation and not likely to lead to relevant information. Notwithstanding, and without waiving, its general and specific objections, AWE respectfully refers Plaintiff to the documents AWE produced on March 9, 2012 (AWE 000325-409), and further states that the Light Pipe in place at LLE on August 6, 2008 was not used in any experiments in which AWE personnel participated prior to August 6, 2008.

**INTERROGATORY 4:** State whether or not any employees of AWE identified in response to Interrogatories 1 or 2 above were aware that the Light Pipe in use at LLE on or prior to August 6, 2008 was operated with the use of pressurized gas.

**RESPONSE:** AWE states that the Light Pipe, as configured and in place at LLE on August 6, 2008, was not used in any experiments in which AWE personnel participated in prior to August 6, 2008. One or more of the AWE personnel identified in response to Interrogatory No. 1 may have been aware that the Light Pipe used on August 6, 2008 was operated with pressurized gas, but no AWE personnel were responsible for any calibration, configuration or operation of pressure related devices in connection with the Light Pipe.

**INTERROGATORY 5:** State whether or not any employees of AWE entered the Target Bay (with or without an escort) when the Light Pipe was present in the Target Bay at any time on or before August 6, 2008.

**RESPONSE:** AWE states that no AWE personnel identified in response to Interrogatory No. 1 entered the Target Bay any time after the installation of the Light Pipe as configured and used on August 6, 2008.

**INTERROGATORY 6:** Identify the employee(s) of AWE that have seen or observed the Light Pipe and/or its pressurized gas system on or prior to August 8, 2008.

**RESPONSE:** AWE states that no AWE employee saw or observed the configuration of the Light Pipe in place August 6, 2008 in the Target Bay any time after its installation, nor did any AWE employee observe the pressurized gas system in place with the August 6, 2008 Light Pipe. Some or all of the AWE personnel identified in response to Interrogatory No. 1 may have observed that portion of the Light Pipe which extended into "La Cave" on August 6, 2008.

**INTERROGATORY 7:** Identify any and all manuals, guides, policies, rules or regulations relating to the LLE that were provided to AWE on or before August 6, 2008.

**RESPONSE:** AWE respectfully refers Plaintiff to the documents AWE produced on March 9, 2012, as well as documents that U of R has produced in this litigation. AWE further states that additional documents responsive to this request may have been made available to AWE through the U of R website that are no longer accessible to AWE and it is, therefore, unable to fully answer this interrogatory.

**INTERROGATORY 8:** State all facts upon which AWE will rely to establish that AWE is entitled to indemnification and/or contribution from the U of R as set forth in paragraph 18 of AWE's Third-Party Complaint.

**RESPONSE:** AWE objects to this interrogatory on the basis that it is premature because discovery is still ongoing. Notwithstanding, and without waiving, its general and specific objections, AWE respectfully refers plaintiff to the U of R's Response to Plaintiff's Rule 36 Request for Admission (Third).

**INTERROGATORY 9:** Identify and state all documents or facts upon which AWE will rely to establish the terms of the contractual relationship between AWE and the U of R.

**RESPONSE:** AWE has not, at present time, alleged a defense based on contractual indemnity, and on that basis, AWE objects to this interrogatory on the ground that it seeks information that is not relevant to this litigation and not likely to lead to relevant information. AWE further objects to this interrogatory on the basis that discovery in this matter is ongoing, and this interrogatory is, therefore, premature.

**INTERROGATORY 10:** State whether or not AWE took any steps on or before August 6, 2008 to determine whether or not the Light Pipe was safe for use under pressurized gas.

**RESPONSE:** AWE states that it had no control over the design, construction, installation, maintenance, repair, or operation of any diagnostics or equipment used at LLE, including the Light Pipe - at any point in time, and as configured on August 6, 2008. AWE further states that it had no reason to believe that the Light Pipe was unsafe for use, with or without pressurized

gas. AWE relied upon LLE to ensure that all elements of the laboratory, including the various diagnostics, were designed and operated in accordance with appropriate safety protocols.

Dated: April 12, 2012  
New York, New York

HOLLAND & KNIGHT LLP

By: /s/Christine Tramontano  
Sean C. Sheely, Esq.  
Christine Tramontano, Esq.  
*Attorneys for Defendant, AWE, PLC*  
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Washington DC 20006  
Phone 202-457-7043  
philip.evans@hklaw.com

**VERIFICATION**

I, TIMOTHY GOLDSACK, pursuant to 17 U.S.C. 1746, under penalty of perjury under the laws of the United States of America, verify that the foregoing Responses to Plaintiff's First Set of Interrogatories to AWE plc are true and correct.

Executed on \_\_\_\_\_ 11 April 2012\_\_\_\_\_



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TIMOTHY GOLDSACK

**CERTIFICATE OF SERVICE**

I, Christine Tramontano, Esq. attorney of record for Defendant, AWE, PLC, in the above-styled and referenced matter, do hereby certify that on April \_\_, 2012, I served the Responses and Objections of Defendant/Third-Party Plaintiff AWE, PLC to Plaintiff's First Set of Interrogatories via electronic mail and first class mail to the following:

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THIS, the \_\_th day of April, 2012.

HOLLAND & KNIGHT LLP

By: /s/ Christine Tramontano  
Christine Tramontano, Esq.  
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## **EXHIBIT 15**

UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF NEW YORK

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SAMUEL M. ROBERTS,

Plaintiff,

-vs-

LOS ALAMOS NATIONAL SECURITY, LLC,  
AWE, PLC, and MASSACHUSETTS INSTITUTE  
OF TECHNOLOGY,

COPY

Defendants,  
Third-Party Plaintiffs,

11-cv-6206(L)

-vs-

UNIVERSITY OF ROCHESTER,

Third-Party Defendant.

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**ANSWERS TO PLAINTIFF'S FIRST SET  
OF INTERROGATORIES TO  
MASSACHUSETTS INSTITUTE  
OF TECHNOLOGY**

Pursuant to Rule 33 of the Federal Rules of Civil Procedure, defendant Massachusetts Institute of Technology (“MIT”) hereby answers Plaintiff’s First Set of Interrogatories dated March 6, 2012, as follows:

**Interrogatory 1.** Identify any employee of MIT that was a principal investigator for the Experiment being conducted at the LLE on August 6, 2008.

**ANSWER: No employee of MIT was a principal investigator for the experiment being conducted at the LLE on August 6, 2008.**

**Interrogatory 2.** Identify any employee of MIT who was a principal investigator for any Experiments conducted at LLE prior to August 6, 2008.

**ANSWER:** MIT objects to Interrogatory 2 on the grounds that such interrogatory seeks information not relevant or material to the issues in this lawsuit, and further upon the ground that Interrogatory 2, to the extent it seeks information with respect to “any Experiments conducted at LLE prior to August 6, 2008”, is oppressive and unduly burdensome. Without waiving such objections, MIT states that there were occasions prior to August 6, 2008, when MIT researchers wrote proposals for experiments conducted at LLE or undertook to have MIT contract with the University of Rochester (“U/R”) for experiments which were conducted at LLE. Upon information and belief, the researchers who did this and were then employees of MIT included the following:

- a. **Johan Frenje, PhD;**
- b. **Richard Petrasso, PhD;**
- c. **Chi-Kang Li, PhD; and**
- d. **Ryan Rygg, PhD.**

**Interrogatory 3.** State which Experiments referred to in response to Interrogatory 2 above were conducted when the Light Pipe was in use.

**ANSWER:** Upon information and belief, none.

**Interrogatory 4.** State whether or not any employees of MIT identified in response to Interrogatories 1 or 2 above were aware that the Light Pipe in use at LLE on or prior to August 6, 2008 was operated with the use of pressurized gas.

**ANSWER:** Upon information and belief, none of the past or present employees of MIT identified in the answer to Interrogatory 2 had any knowledge prior to August 6, 2008, about whether the light pipe was operated with the use of pressurized gas.

**Interrogatory 5.** State whether or not any employees of MIT entered the Target Bay (with or without an escort) when the Light Pipe was present in the Target Bay at any time on or before August 6, 2008.

**ANSWER:** MIT is unable to answer Interrogatory 5, as none of its current employees and, upon information and belief, none of the MIT researchers affiliated with the Plasma Science and Fusion Center, have knowledge of when the light pipe was installed at LLE prior to August 6, 2008.

**Interrogatory 6.** Identify the employee(s) of MIT that have seen or observed the Light Pipe and/or its pressurized gas system on or prior to August 8, 2008.

**ANSWER:** Johan Frenje, PhD, states that he does not recall ever seeing the light pipe, or having had the light pipe identified for him, prior to August 6, 2008. Upon information and belief, none of the other MIT researchers ever had an opportunity to view the light pipe prior to August 6, 2008.

**Interrogatory 7.** Identify any and all manuals, guides, policies, rules or regulations relating to the LLE that were provided to MIT on or before August 6, 2008.

**ANSWER:** MIT researchers received training from the U/R regarding LLE before being allowed to participate in any experiments being conducted at LLE. None of the MIT researchers, however, was given

**any manuals, guides, policies, rules, or regulations in the form of any distributed publication, prior to August 6, 2008.**

**Interrogatory 8.** State all facts upon which MIT will rely to establish that MIT is entitled to indemnification and/or contribution from the U of R as set forth in paragraph 18 of MIT's Third-Party Complaint.

**ANSWER:** MIT objects to Interrogatory 8 on the grounds that it seeks information that is not within the personal knowledge of any MIT employee or MIT researcher who was ever present at LLE. Without waiving such objection, MIT states that the following facts entitle it to indemnification and/or contribution from the U/R. MIT reserves its right to supplement these answers as information becomes available from third-parties during the discovery process.

**Contractual Indemnification:** Attachment C to the subagreement between MIT and the U/R contains a paragraph no. 16, which reads as follows:

**Indemnification.** UR agrees to indemnify, defend and hold harmless Subrecipient and its agents and employees from and against any and all claims, demands, damages (including reasonable attorney's fees), and causes of action arising solely out of or relating solely to UR's negligent acts, errors or omissions with regard to this Agreement.

(See MIT00739.)

**Common Law Indemnification:** The premises where plaintiff's injury occurred were owned by the U/R and not MIT at all relevant times; the premises where plaintiff's injury occurred were under the exclusive control of the U/R and not MIT at all relevant times; the

**light pipe was designed, constructed, installed, maintained, repaired, and operated by the U/R and not MIT at all relevant times; plaintiff was an employee of the U/R and never an employee of MIT; it was the responsibility of U/R and not MIT to supervise and train plaintiff at all relevant times; the U/R had responsibilities for safety within the OMEGA responsibility and MIT was not responsible for safety within the OMEGA facility.**

**Interrogatory 9.** Identify and state all documents or facts upon which MIT will rely to establish the terms of the contractual relationship between MIT and the U of R.

**ANSWER:** See answer to Interrogatory 8.

**Interrogatory 10.** State whether or not MIT took any steps on or before August 6, 2008 to determine whether or not the Light Pipe was safe for use under pressurized gas.

**ANSWER:** MIT did not take steps to determine whether the light pipe was safe for use because MIT did not design, construct, install, maintain, repair, or operate the light pipe at any time. Furthermore, MIT was not responsible for safety within the OMEGA facility.

Dated: April 24, 2012  
Rochester, NY

s/ David Rothenberg  
David Rothenberg, Esq.  
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## VERIFICATION

STATE OF NEW YORK:  
COUNTY OF MONROE: ss.

**JOHAN FRENJE**, being duly sworn, deposes and says:

1. I am a researcher employed by the defendant, Massachusetts Institute of Technology, in the within action;
2. I have read the foregoing Answer to Interrogatories and know the contents thereof; and
3. The same are true to my own knowledge except as to the matters therein stated to be alleged on information and belief, and as to those matters, I believe them to be true.

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*/ Johan Frenje*

Johan Frenje

Sworn to before me on the  
24<sup>th</sup> day of April 2012.

---

*/ David Rothenberg*

Notary Public

DAVID ROTHENBERG  
Notary Public for the State of New York  
County of Monroe  
Commission Expires 7/31/2014

UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF NEW YORK

---

SAMUEL M. ROBERTS,

Plaintiff,

-vs-

LOS ALAMOS NATIONAL SECURITY, LLC,  
AWE, PLC, and MASSACHUSETTS INSTITUTE  
OF TECHNOLOGY,

Defendants,  
Third-Party Plaintiffs,

11-cv-6206(L)

-vs-

UNIVERSITY OF ROCHESTER,

Third-Party Defendant.

---

**CERTIFICATE OF SERVICE**

I hereby certify that on April 24, 2012, I served a true and accurate copy of the foregoing answers to interrogatories, by placing a true copy thereof enclosed in a post-paid wrapper in a depository, under the exclusive custody and control of the United States Postal Service, addressed to:

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*s/Beverly G. Evans*

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Beverly G. Evans